```
[&control|&(control)U[p]] [*|n|1]    (Note: 3270 only.)
&Trial [OFF|ON|ALL|&oop [lnct|10]]
&DOT
&STACK [a|1|0] [any valid EDIT subcommand]
&TABSet  n1 [n2 ... n8]
&TOP
&TRUNC [n|*]
&type [line|* [n|*]]
&Up [n|1]
&Verify [OFF|OFF] [(startcol[,]] endcol|*]
(&IF)  [any valid EDIT subcommand|a|1]
&Use [firstcol|*|1 [lastcol|*]]
[&name|&noname] [text]
&READ [fn|*] [ft|*] [fm|*] [(options...)]
Options:
[&type|&string]
```

- &SERV fn
- [&Pad] fn [args...]

The formats of the &EXEC control statements are:

```
&variable = [&string|&literal|&function|&'&xxxx]
&ARGS [arg1 [arg2 ... [arg30]]]
&BEGEXEC [ALL]
&BEGPUNCH [ALL]
&BEGSTACK [LIFO|FIFO] [ALL]
&BEGTYPE [ALL]
&CONTINUE
&CONTROL [OFF|ERROR|ALL] [TERM  |NOPROMPT|NOMSG]
                         [NOTERM|PROMPT |MSG  ]
&END& &name& [tok1 ... [tok30]]
&END
&ERROR [executable-statement|&CONTINUE]
&EXIT [return-code|0]
&GOTO [&OP|line-number|-label]
&GET  [CONIOFF]
&IF [tok1] ( [ NOT|¬ |(NE)|¬= ] tok2) executable-statement
   [&E  ] ( [ LT|<  |(GE)|>= ] &E  )
   [&=  ] ( [ LE|<= |(GT)|>  ] &=  )
&LOOP [n1-label] [&(condition)]
&PUNCH [tok1 [tok2 ... [tok30]]]
&READ [VARS [&var1 [&var2 ... [&var30]]]|ARGS|&|&]
&SKIP [n1|1]
&SPACE [n1|1]
&STACK [LIFO|FIFO] [MSG|NOMSG] [tok1 [tok2 ... [tok30]]]
&SYNS  [ON|OFF|RESET|TYPE]
&TYPE [tok1 [tok2 ... [tok30]]]
```

The format of &EXEC built-in functions are:

```
&variable = &CONCAT  &tok1 [&tok2... [&tok30]]
&variable = &DATATYPE tok1
&variable = &LENGTH token
[...] &LITERAL token [...]
&variable = &SUBSTR token 1 [5]
```

The &EXEC special variables are:

&0	&SYSK*	&EXEC	&LINENUM
&*	&SYSK#	&&GLOBAL	&&ERRFLAG
&@	&SYSK@	&&GLOBALn	&&RCCODE
&0	&SOS	&&INDX	&&TYPEFLAG

- &EXEC 2 (see ProTerence Summary &&CSP &&EXEC 2 Language, Order No. &&24-5134
- &Fnch phaseunge [/options.../] [=]
  Options:
  [&START] [/CONP] [&VERIGEN &erloc]
- FiledefI [&dname] [terminal [/optional options/]]
  [*|n] [PS|Printer|Punch|Reader] [(option1[,])]
  [*|0]
  DISK [fn ft fm|*] [(optional option1[,])]
  [&&&& ddname |&1|]
  [DISK|fn ft fm|*] [file|1 (SSN qual1 ...)]
  [1 &&&& ddname|1|&1|] [SSN qual1 ...]
  [(optional option1[,])]
  CONSOLE [(option1[,])]
  TAP[n|1] [1&NOPP] [(option1
  |&&&[n] |optionC
  |&&&[n] [*|VOLID volid1|] |option1[,])]
  |&&&[n] [*|VOLID volid1|]
  |NSL filename |
  |NL[n|1] |
  CLEAR
- opt1: [PERM|] [CHARGE|NOCHARGE|] [RECL nnnn|] [BLOCK|BLKSZE nnnn] [RECFM [&|F|V|B|T|S|M|A|P|V|B|T|S|M|A]]
- opt2: [&STYLEN nn|] [&TYPE (nnnn[,50]) [,CONCAT] [,LINCT nnn|] [OPTCD ([a|m][F|E|H])] [DISP MOD|] [&&&PDS membername|] [DSORG [PS|PO|DA]]
- opt3: [/TRACE|/DTRACE|] [/TRUNC [digit|*|NTS]] [DSN [200|556|800|1600|6250]]
- opt4: [[RECAT|&LOWCASE|]
- opt5: [LRATE|NOROVY]
- FINIS [fn|*] [ft|*] [fm|*]
- &OSRAT cmn mode [nocyl|cchhlr|b3 [(options...[)]]
  options:
  [label|&&comp|&&crate|&&&size [800|]
  |2029|
  |2048|
  |4096|
  | 16|
  | 2K|
  | 4K|
- &ENDINT directorynane [targetnode]
- &SWAPAPE [VM/370|DISCC[ONLY]|DRE&IO[ONLY]|DRE&TS&[ONLY]|DRE&CPC&[ONLY]|DRE&CPCS&|DCL&IO|DCL&TS&|DCPC&&|DCL&IO&|DSC&[ONLY]]
- &ENDTRACE [fn|&TSTIN|[ft|FILE][fm|*][nfn|&IOPEEK|*|nft|&IOTIRC]
  [nfn|A1]
- &&&&&d [fn [MODULE [fn|A1]]] [(options...[)]]
  options:
  [NOSE|&&&P] [STR|NOSTR] [FROM entry1] [TO entry2] [SYSTEM]
  [NS|DOS|ALL]
- GET370 fn ft [fn] [(options...[)]]
  options:
  [NON|NOSE] [SAVE|NOSAVE]
- Global [MACLIB|TEXTLIB|DOSLIB|LOADLIB] [libname1... libname8]
- EB
- Help [asg nanber] [(options...[)]]
  |&&&&&&&&|
command nane	&EXEC
	subcommand
exec nane	
filename	
component nane (&EXEC)
|command nane (	options:
|exec nane		[ALL|FORM|PARM|DESC]
|subcommand	
- HO
- HT
- HX
- IRAGLIB nanedsys
- IRAGMOD [GEN] [libnane
  [ADD] [(nodnane [nodnane]...)]
  [REP]
  [DEL]
  [MAP [/options.../]]]
  options (for MAP only):
  [START|FIRST|LOAD]
- Include fn... [(options...[)]]
  options:
  [CLEAR|NOCLEAR] [RESET (entry1[,])] [NOMAP|MAP] [NOSYM|SYM]
  [NORES|RES] [TYPE|NOTYPE] [NOAUTO|AUTO] [NOLIB|LIB]
  [MODE[|DUP] [START] [NAME] [ORIGIN[(hexlocz|TRANS]]
- LabeldefI [filename] [CLEAR] [(op-
  [*] [FID [7|fid]] [VOLID volid]] tions...[)]]
  [VOLSEQ volseq] [RSEQ rseq]
  [CREATE cnan] [CENT cenv]
  [CRYR cnan] [CENY ceny]
  [CDATE yyddd] [EXPDT yyddd]
  [SEC [S|1|3]]
  options:
  [PERM] [CHARGE|NOCHARGE]
- LISTDS [*|fname [fnt|*] [(options...[)]]
  options:
  [(FORMAT|FO)][PDS[E] [EXTENT|EX]][FREE]
- ListfileI [fn|*] [ft|*] [fm|*]]] [(options...[)]
  options:
  [Header|NOHeader] [Exec|APPend]
  [PAnse|PTYpe|PAdes|POrnat|BLInes|Date|Label]
- LISTID [STD|PROG|[STname|A1|OA1|ALL] [options...[)]]
  options:
  [EXEC|APPEND] [STAT]
- XEED fn [(options...[)]]
  options:
  [NCAL [DT] ALIGN2] [NE] [OL] [RENT] [RMOD] [RSPB] [OVLY] [XCAL]
  [TERM|NOTERM] [NAME nodbernane] [LIBR libraryname]
  [TEXT|RLA|LEST] [PRINT|DISK|NOPRINT]
- LOAD fn ... [(options...[)]]
  options:
  [CLEAR|NOCLEAR] [RESET (entry1*)] [NOMAP|MAP] [NOSYM|SYM]
  [NORES|RES] [START] [TYPE|NOTYPE] [NOAUTO|AUTO] [NOLIB|LIB]
  [ORIGIN [hexlocz|TRANS]] [NOMODE|MODE]
- LOADLIB [LIST] fileid1 [fileid2 [fileid3]] [(options...[)]]
  [COMPRESS]
  [COPY]
  options:
  [TERM|PRINT|DISK] [REPLACE|NOCOPY]
  XEDIT control statements (for COPY only:
  [SELECT|EXCLUDE]
- LOADMod fn [MODULE [fn|*]]
- MACLib [(GEN)]
  [ADD libnane fn1 [fn2...]]
  [DEL]
  [REP]
  [DEL libnane membername1 [membername2...]]
  [COPY libnane]
  [MAP libnane [(options...[)]]]
  options (for MAP only):
  [TERM|PRINT|DISK]
- NAMEDEF
- NODDap fn
- NOTEFile [iddname|&RNOTH[outddname|OUTPOTF]][(PDS[)]]
- NCPDUMP [DUMPxx] [(options...[)]]
  options:
  [[[ERASE] [NOPOSE] [MNEMONIC] [NCPDUFF] [ ]]
- OPTION [options...]
  options:
  [NUM|NODUMP] [DECH|NODECH] [LIST|NOLIST] [LISTX|NOLISTX]
  [STR|NOSTR] [RESE|NORESP] [RES|NORES] [&&C|&OC] [TERM|NOTERM]
- OSSUM member PARM=parameter
- Print fn ft fm [*|1] [(options...[)]]
  options:
  [CC|NOCC] [NAMber (*|name)] [UPCase] [REX] [LLnecount (n|55)]
- PSERV procedure [ft|PROC] [(options...[)]]
  options:
  [SEND] [PRINT] [PUNCH] [TERM]
- PTech fn ft fm[*] (options...[)]
  options:
  [Header|NoHeader] [Number (*|nenbernane)]
- Query [BRDEEV
  BLIP
  DISK [node|*]
  FILEDEF
  IMPCP
  INFXT
  INPUT
  LABELDEF
  LOGTELS
  LIBRART
  MACLIB
  OUTPUT
  PROCTECH
  RDYESC
  RMTYPE
  STACKTE
  SYNONYM
  TXTLIB [SYSTEM|SYSTEXEB|USER|ALL]
  TYPLIBS
  TYTLIB
  CMS/DOS Functions:
  DOS
  DOSLIB
  DOSPART
  OPTION
  VFS1]
- RELDCard [(fn) [ft] [fm|A] | (*) [*] [fm|A]]
- RELease [cms|node] [(DBT)]]
- Rename fileid1 fileid2 [(options...[)]]
  options:
  [NOPL|NOTYPE] [PRAdirt|NOUPdirt]
- RO
- RSENT nodnane [ft|TEXT] [(options...[)]]
  options:
  [NOLE] [PRINT] [PUNCH] [TERM]
- RT
- RUN fn [ft [fn]] [(args...)]
- SET function
  functions:
  [LOBYTES| nn] [RELPAGE [ON|OFF]] [RETURN [a xxiixx yy]]
  [RUNTABLE [ON|OFF|LOAD]] [ARROW [OFF|ON]] [PFCP [OFF|ON]]
  [BLIP [&string|count]] [CH|OFF] [CHSTYPE [BY|BY]]
  [COPYSEP nn] [TECOTYPE [ON|OFF]] [RETYE [OFF|ON]]
  [AUTOREAD [ON|OFF]] [PROTECT [OFF|ON]]
  [SYSNAME [CMSDOS|CMSYSAM|CMSAMS|CMSESA] entryname]
  [NONSHARE [CMSDOS|DOSVSAM|CMSDOS|CMSAMS]]
- SHPFEF [CHgar[(]coucc...[)]]
  [COpline[ ]&&&[ ]]
  [COPYarf[ ]&&&[ ]]
  [CPCH [ ]&ffdt[ ]]
  [Flash[ ]154 &&&[ ]]
  [Init]
  [Modify[ ]&&&[n][ ]]
- SO
- SORT fileid1 fileid2
- SSENT subjib bookname [ft|COPY] [(options...[)]]
  options:
  [NOLE] [PRINT] [PUNCH] [TERM]
- START [(entry1[,] [args ...]|NO]
- [STATE|STATEW] (fn|*) (ft|*) [fn|*]
- SVCTrace [ON|OFF]
- STNonya [fn [SYNDEFN [fn|A1|*]]] [(options...[)]]
  options:
  [HOSTN|DEF] [CLEAR]
- TAPE [DENS [fn|*] [ft|*] [fn|*] [(opt1 opt2 opt3[,])]
  DVOLT [(opt1 opt2[,])]
  LOAD [fn|*] [ft|*] [fn|A] [(opt1 opt2 opt3[,])]
  NODENST [(OPEN[,])]
  SCAN [fn|*] [ft|*]] [(opt1 opt2 opt3[,])]
  SKIP [fn|*] [ft|*]] [(opt1 opt2 opt3[,])]
  tapcmd [n|1] [(opt1[,])]
  TVOLT volid [(owner)] [(opt1 opt2[,])]

  Note: The tapcmd operand can be:
  [BSF|BSR|BSP|FSF|FSR|RUN|RUN|WTM]
- TAPPRS [fn|*[ft|*[fm|*|A]] [NSI [label1|fid4]] [(op-
  [*] [FID [7|fid]] [VOLID volid]] tions...[)]]
  [NSL filename[ID=idcn-1|
  | |tifier]|
  | |
  | |
  options:
  [UPDATE| [COL1] [TAPn] [END] [MAXTEN]
  [NOPDS | [BOCOL1| [ZAP1 | [NOEND] | [NOMAXTEN]
  [PDS] [ ] [ ] [ ]
- TXTLib [(GEN libname fn1 [fn2...])
  [ADD libname fn1 [fn2...]]
  [DEL libname membername2 [membername2...]]
  [MAP libname [(options...[)]]
  options (for MAP only):
  [TERM|PRINT] [DISK]
- Type fn ft [fn|*] [(rec1|*|1] [recn|*]] [(options...[)]]
  options:
  [COL [xxxxx|1]-[yyyyy|xxxx]] HEX [(HEXBYTE|HEX) [*|name]]
- Update fn [ft|] [fm|] [fn2 [ft2 [fm2]]]] [(options...[)]]
  [ASSEMBLE| A1]
  options:
  [REP] [NOSHOW|] [ESC] [CUL] [STK] [CONFIRM]
  [NORMP| [SHOW] [NOINC| [NOCOL| [NOSKE| [TERM]
  [ ] [ ] [ ] [ ] [ ]
  [PRINT|] [STOR]
  [DISK | [HOSTOR]
  [ ] [ ]
  Control Statements:
  -/ $ [seqstrt [seginc [label]]]
  -/ $ seqno [$] [seqno2 [$] [seginc]]
  -/ D seqno1 [seqno2] [$]
  -/ $ seqno1 [seqno2] [$ [seqstrt [seginc]]]
  -/ * [comment]
- XEDIT (see Reference Summary XEDIT Commands, Order No. &&24-5122)

SECC Commands

- Backspac [linkid] [FILE|nan]
- Change [linkid] spoolid [PRIority nn
  Class c
  COpy nn
  [NOId|NOHold]
  DIst distcode
  Name [fn [ft]dsname]]
- CMD linkid [text|LOG|NOLOG]
- DEFine linkid [CLass c|KEEP hold|slot|NEW vaddr] [TASK name|TYPE driverid]
- DELete linkid
- DISConn [nnerid]
- DRain [linkid]
- Flush [linkid] [spoolid#] [ALL] [NOId]
- FOne [linkid] [nan]
- FWdspace [linkid] [nan]
- Hold [linkid] THRSD
- Msg linkid [nnerid] anytext
- ORDer [linkid] [spoolid1 [spoolid2...]]
- PURge [linkid] [ALL|spoolid1 [spoolid2...]]
- Query [Linkid [Stat|DefiQueue]
  File spoolid / TASK|DSCS[VM]]
  [Status [Active]]
- START [linkid] [Class c] [Parm...]
  [LOAD vaddr]
  [TYPE name]
  [TYPE driverid]
- TAG (described under CP class G commands)
- TRace linkid [ALL|RSSorz|RND]

Service Aids

DASD/DUMP/RESTORE Service Program

- DDR [fn ft [fn|]]

  I/O Definition Statements:
  [INput|OUTput] cuu type [volser|altspc] [(options...[)]]
  [SKip [nn|0]] [RSWind|RLWeed|RELoad] [MODe (6250|1600|800)]

  SYSPRINT Control Statements:
  SYSprint cuu
  [Type|Notype]

  Function Control Statements:
  [DUmp] [cyl1 [to] cyl2 [Reorder] [To] [cyl3]]
  [COpy] [CPvol]
  [REstore] [NOcleau]
  [Alk]

  TYPE and PRINT Function Statements:
  [PRInt| cyl1 [hk1 [or|&]][to cyl2 [hk2 [rf2]]]][(options...[)]]
  [Type] [0 [0]]
  [*]

  options:
  [Dmp] [Graphic] [CoUnt]

Format/Allocate Service Program

Format Service Aid Control Statements:
FORMAT,devadr,devtype,volser,startcyladr,endcyladr
ALLOCATE,devadr,devtype,volser
TRKF,startcyladr,endcyladr
PDSF,startcyladr,endcyladr
VOLF,startcyladr,endcyladr
DSCF,startcyladr,endcyladr
END

FORMAT,devadr,devtype,volser,LABEL

IBCDASDI Service Program

Control Statements:
JOB (user information)

RSC TODEV=xxxx,TOADDR=cuu

DADEF TODEV=xxxxxx,TOADDR=cuu[,IPL=YES] [,VOLID=[serial|SCRATCH]]
 [,MODEL=n] [,CYLNO=nnn] [,FLAGTEST=NO] [,PASSES=n] [,BYPASS=YES]

VLD NEWVOLID=serial[,VOLPASS=([1]1)]
 [,OWNERID=xxxxxxxx][,ADDLABEL=n]

VTOCD STNADR=nnnnn,ENTRST=nnnn

END (user information)

SPBALV TODEV=xxxx,TOADDR=cuu,TRACK=cccchhhh,VOLID=serial
 [,FLAGTEST=NO] [,PASSES=n] [,BYPASS=YES] [,MODEL=n]

First Edition (September 1980)

This edition, SX20-4401, corresponds to the IBM Virtual Machine/System Product and to all subsequent releases unless otherwise indicated in new editions. Note that the basic documents are the authoritative sources and will be first to reflect any changes. Information herein is extracted from SC19-6202, SC19-6203, SC19-6205, GC20-1816, SC19-6209, SC19-6210, SC19-6211, and GC20-1823.

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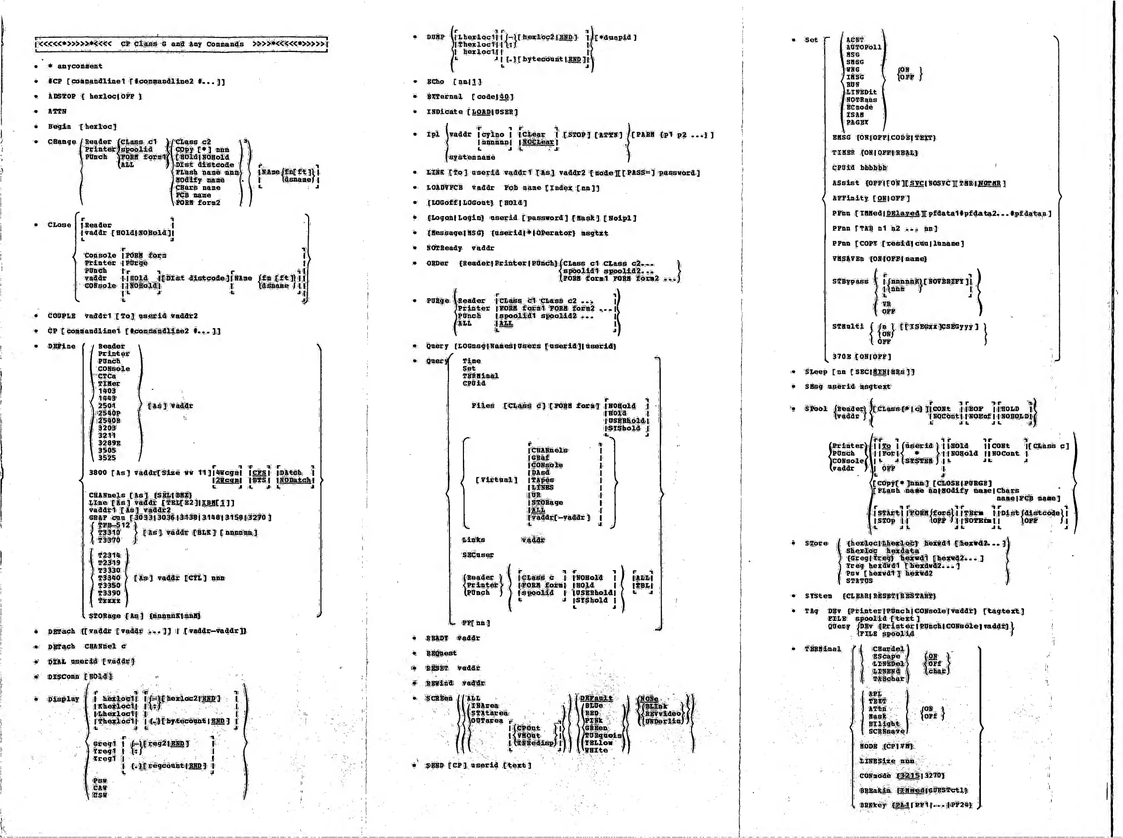
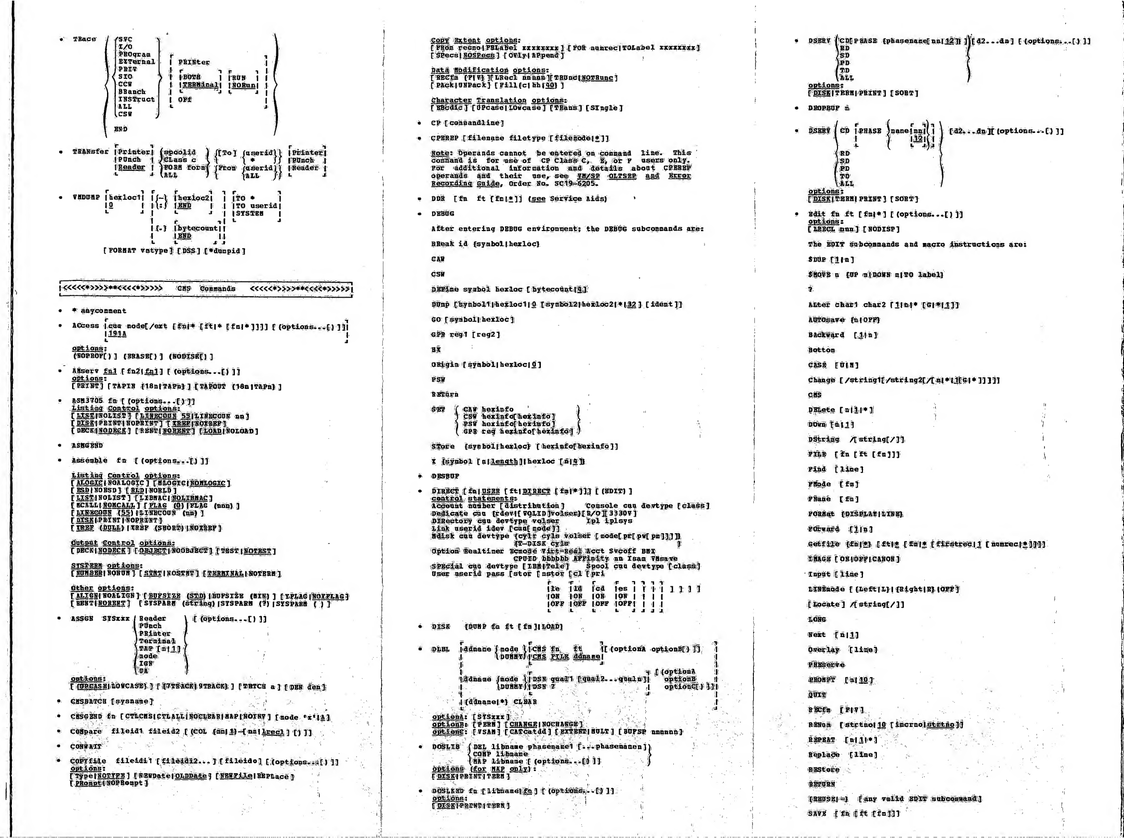
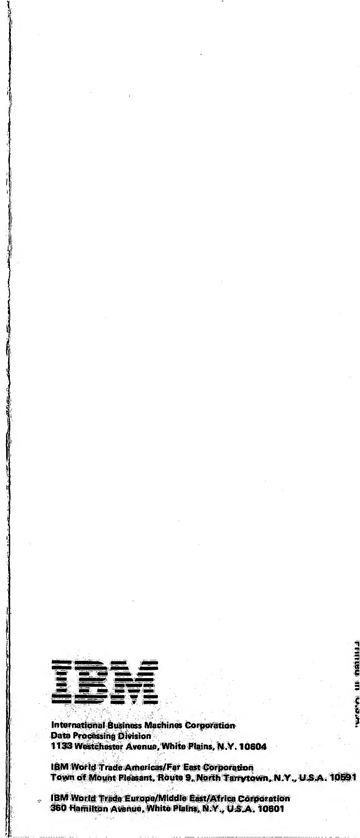
IBM **Reference Summary**

Virtual Machine/System Product Commands (General User)

SX20-4401-0







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